

=> FILE REG  
FILE 'REGISTRY' ENTERED AT 16:15:43 ON 13 JAN 2005  
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STRUCTURE FILE UPDATES: 11 JAN 2005 HIGHEST RN 811782-89-5  
DICTIONARY FILE UPDATES: 11 JAN 2005 HIGHEST RN 811782-89-5

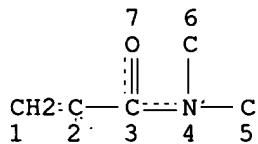
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

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conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

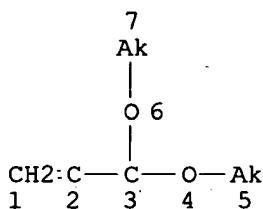
=> D QUE L5  
L2 STR |



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE  
L3 STR 2



NODE ATTRIBUTES:  
DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED

There are zero  
answers from structure 1  
and 2

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L5 0 SEA FILE=REGISTRY SSS FUL L2 AND L3

=> D QUE L15

L13 15 SEA FILE=REGISTRY ABB=ON 6044-68-4/CRN  
L14 3326 SEA FILE=REGISTRY ABB=ON 2680-03-7/CRN  
L15 0 SEA FILE=REGISTRY ABB=ON L13 AND L14

=> => FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:17:17 ON 13 JAN 2005  
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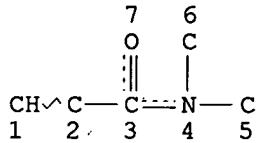
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FILE COVERS 1907 - 13 Jan 2005 VOL 142 ISS 3  
FILE LAST UPDATED: 12 Jan 2005 (20050112/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> D QUE

L6 STR 1



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 7

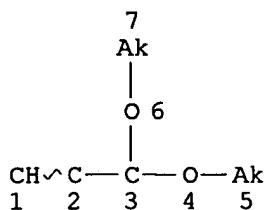
STEREO ATTRIBUTES: NONE

L7 STR 2

Component RN's  
for  
*N,N'*dimethyl  
acrylamide  
and  
*3,3*dimethyl  
propene

42 structures from  
structure 1 and 2 which  
picks up structural repeating  
units as well as  
monomers.

only 7 of the 42  
answers are polymers.



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L9 42 SEA FILE=REGISTRY SSS FUL L6 AND L7  
L16 42 SEA FILE=REGISTRY POLYLINK L9  
L17 7 SEA FILE=REGISTRY ABB=ON L16 AND PMS/CI 7 polymers  
L18 6 SEA FILE=HCAPLUS ABB=ON L17 6 CA references

=> D L18 BIB ABS IND HITSTR 1-6

L18 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 2004:625571 HCAPLUS  
DN 141:314735  
TI Versatile Synthesis of End-Functionalized Thermosensitive Poly(2-isopropyl-2-oxazolines)  
AU Park, Joon-Sik; Akiyama, Yoshitsugu; Winnik, Francoise M.; Kataoka, Kazunori  
CS Department of Materials Science, Graduate School of Engineering, University of Tokyo, Tokyo, 113-8656, Japan  
SO Macromolecules (2004), 37(18), 6786-6792  
CODEN: MAMOBX; ISSN: 0024-9297  
PB American Chemical Society  
DT Journal  
LA English  
AB The synthesis of several end-functionalized poly(2-isopropyl-2-oxazolines) (PiPrOx) has been achieved via cationic ring-opening polymerization of 2-isopropyl-2-oxazoline. Poly(2-isopropyl-2-oxazolines) bearing primary amino groups at one chain end (Me-PiPrOx-NH<sub>2</sub>, with Mn ranging from 3600 to 9700) were obtained by conversion of hydroxyl-terminated poly(2-isopropyl-2-oxazolines) (Me-PiPrOx-OH) via phthalimide activation of the hydroxyl groups and subsequent hydrazine treatment. Heterottelechelic PiPrOx carrying an  $\alpha$ -acetal and an  $\omega$ -hydroxyl group (acetal-PiPrOx-OH) were prepared via cationic ring-opening polymerization of 2-isopropyl-2-oxazoline initiated with 3,3-diethoxy-1-Pr tosylate. The polymers carried out under mild conditions (40-45 °C) for extended periods of time yielded polymers of well-controlled mol. weight (MW) and narrow mol. weight distribution (MWD). Anal. of the polymers by 1H and 13C NMR spectroscopy, ion-exchange HPLC, and MALDI-TOF mass measurements indicated that nearly quant. end-functionalization was achieved in all cases. Aqueous PiPrOx solns. (10 mM PBS (pH 7.4) containing 150 mM NaCl) possess

a cloud point temperature near 37 °C, as determined by turbidity. Thermosensitive telechelic PiPrOx offer promising applications as smart materials including bioconjugates, hydrogels, and drug carriers.

CC 35-7 (Chemistry of Synthetic High Polymers)

ST thermosensitive end functionalized polyisopropylloxazoline deriv prepn property

IT Polyamines

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (polyethylene-, N-acyl; versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

IT Polymerization

(ring-opening; versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

IT Cloud point

Molecular weight

Molecular weight distribution

Optical transmission

(versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

IT 767321-27-7P 767321-28-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and hydrozinolysis; versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

IT 767321-24-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction with phthalimide; versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

IT 98-59-9, p-Toluenesulfonyl chloride 16777-87-0, 3,3-Diethoxy-1-propanol

RL: RCT (Reactant); RACT (Reactant or reagent)

(telogen synthesis; versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

IT 767321-23-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(telogen; versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

IT 85-41-6DP, Phthalimide, reaction products with hydroxy-terminated poly(isopropylloxazoline) 25822-68-8DP, Poly(2-Isopropyl-2-oxazoline), hydroxy-, acetal-, and amino-terminated 76214-78-3DP, reaction products with diethoxypropyl tosylate, hydrolyzed 767321-23-3P

**767321-26-6P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

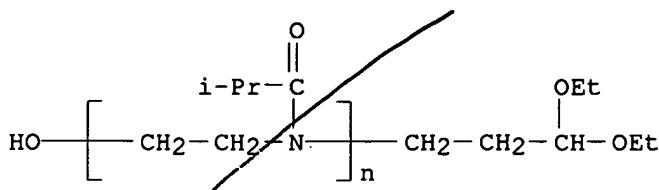
IT **767321-26-6P**

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(versatile synthesis and properties of thermosensitive end-functionalized poly(isopropylloxazolines))

RN 767321-26-6 HCPLUS

CN Poly[[(2-methyl-1-oxopropyl)imino]-1,2-ethanediyl],  $\alpha$ -(3,3-diethoxypropyl)- $\omega$ -hydroxy- (9CI) (CA INDEX NAME)



RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1990:407716 HCAPLUS

DN 113:7716

TI Preparation of temporary wet strength resins and their use in paper products

IN Bjorkquist, David William

PA Procter and Gamble Co., USA

SO Eur. Pat. Appl., 10 pp.

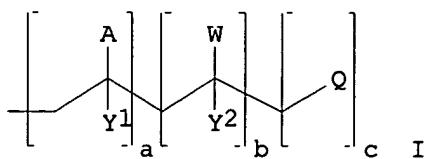
CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 350277	A2	19900110	EP 1989-306800	19890704
	EP 350277	A3	19910703		
	EP 350277	B1	19941026		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	US 5008344	A	19910416	US 1988-215132	19880705
	ES 2061999	T3	19941216	ES 1989-306800	19890704
	CA 1337617	A1	19951121	CA 1989-604717	19890704
	JP 02124912	A2	19900514	JP 1989-173874	19890705
	JP 2930601	B2	19990803		
	US 5085736	A	19920204	US 1991-647958	19910130
PRAI	US 1988-215132	A	19880705		
GI					



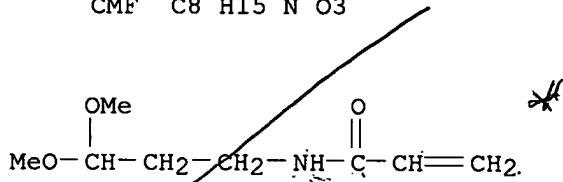
AB The water-soluble title resins have the formula I (A = H or XR; X = O, NH or NMe; R = substituted or unsubstituted aliphatic groups; Y1Y2 = H, Me, or a halogen; W = nonnucleophilic amide; Q = a cationic monomeric unit; a = 1-70; b = 10-90; and c = 1-40 mol%) have mol. weight 40,000-400,000. Thus, N,N-dimethylacrylamide, acrolein, and [3-(methacryloylamino)propyl]trimethyl ammonium chloride were copolymerd. in the presence of V-50 catalysts,  $\beta$ -mercaptoethanol, and H2O under Ar at 60° to give a white solid material having mol. weight 40,000-45,000. The water-soluble polymer was used in the manufacture of tissue paper at rate of 2.2 lbs per ton of pulp.

IC ICM C08F220-54

ICS C08F246-00; C08F216-34; A61L015-00  
CC 38-3 (Plastics Fabrication and Uses)  
Section cross-reference(s): 43  
ST wet strength temporary resin manuf; acrolein copolymer wet strength paper;  
methylacrylamide copolymer wet strength paper; quaternary ammonium salt  
copolymer manuf; polymn amide wet strength resin  
IT Quaternary ammonium compounds, polymers  
RL: PREP (Preparation)  
(polymers with unsatd. compds. and amides, preparation of, as temporary wet  
strength resins, for paper)  
IT Amides, polymers  
RL: PREP (Preparation)  
(polymers with unsatd. compds. and quaternary ammonium salts, preparation  
of, as temporary wet strength resins, for paper)  
IT Paper  
(tissue, temporary wet strength resins for, preparation of)  
IT 127552-50-5P 127552-51-6P 127552-53-8P  
RL: PREP (Preparation)  
(preparation of, as temporary wet strength resin, for paper)  
IT 127552-53-8P  
RL: PREP (Preparation)  
(preparation of, as temporary wet strength resin, for paper)  
RN 127552-53-8 HCPLUS  
CN 1-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with  
N-(3,3-dimethoxypropyl)-2-propenamide and N,N-dimethyl-2-propenamide (9CI)  
(CA INDEX NAME)

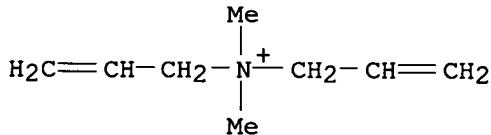
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CRN 127552-52-7  
CMF C8 H15 N O3



CM 2

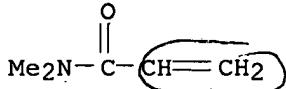
CRN 7398-69-8  
CMF C8 H16 N . Cl



● Cl<sup>-</sup>

CM 3

CRN 2680-03-7  
 CMF C5 H9 N O

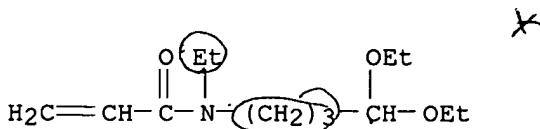


L18 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN  
 AN 1988:510973 HCAPLUS  
 DN 109:110973  
 TI Amide-blocked aldehyde-functional monomers. Cross-linkable substrate-reactive copolymers  
 AU Pinschmidt, R. K., Jr.; Davidowich, G. E.; Burgoyne, W. F.; Dixon, D. D.; Goldstein, J. E.  
 CS Air Prod. Chem., Allentown, PA, 18105, USA  
 SO ACS Symposium Series (1988), 367(Cross-Linked Polym.), 467-78  
 CODEN: ACSMC8; ISSN: 0097-6156  
 DT Journal  
 LA English  
 AB Vinyl-substituted cyclic hemiamidals and their interconvertible acetal precursors (e.g. acrylamidobutyraldehyde di-Me acetal) were incorporated as latent crosslinkers and substrate-reactive functional comonomers in solution and emulsion copolymers. The copolymers showed low energy cure potential, long shelf life and high catalyzed pot stability in solvents and aqueous media, good substrate reactivity and adhesion, and good product water and solvent resistance. The copolymers lacked volatile or extractable aldehyde (e.g. HCHO) components and showed enhanced reactivity and hydrolytic stability with amines and diol-functional substrates.  
 CC 35-4 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 37  
 ST latent crosslinker hemiamidal acetal monomer; acrylamidobutyraldehyde acetal crosslinking copolymer; crosslinking blocked aldehyde functionalized monomer; shelf life crosslinked acetal copolymer  
 IT Glass, oxide  
 Polyesters, uses and miscellaneous  
 RL: USES (Uses)  
 (adhesion to, of acrylamidobutyraldehyde dialkyl acetal copolymers)  
 IT Crosslinking catalysts  
 (for blocked aldehyde-functional vinyl copolymers, effectiveness of)  
 IT Crosslinking  
 (of blocked aldehyde-functional vinyl copolymers, methods for and mechanisms of)  
 IT Adhesion  
 (of blocked aldehyde-functional vinyl copolymers, to polyester and glass substrates)  
 IT 104-15-4, p-Toluenesulfonic acid, uses and miscellaneous 631-61-8, Ammonium acetate 7664-38-2, Phosphoric acid, uses and miscellaneous 12125-02-9, Ammonium chloride, uses and miscellaneous 36994-77-1 60223-95-2, Nacure 155  
 RL: CAT (Catalyst use); USES (Uses)  
 (catalysts, for crosslinking of acrylamidobutyraldehyde dialkyl acetal copolymers, effectiveness of)  
 IT 116117-82-9  
 RL: USES (Uses)

(catalyzed pot life and cured film properties of)  
IT 13188-82-4D, polymers with acrylamidobutyraldehyde dialkyl acetals and  
vinyl acetate  
RL: PROC (Process)  
(crosslinking behavior of)  
IT 74-85-1D, Ethylene, polymers with acrylamidobutyraldehyde dialkyl acetals  
and vinyl acetate 108-05-4D, Vinyl acetate, polymers with  
acrylamidobutyraldehyde dialkyl acetals and ethylene 116237-68-4D,  
dialkyl acetals, polymers with ethylene and vinyl acetate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(crosslinking of, catalyst effects on)  
IT 49707-23-5P, Acrylamidoacetaldehyde dimethyl acetal 107979-33-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and polymerization of, with Bu acrylate)  
IT 107995-78-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction of, with acryloyl chloride)  
IT 22483-09-6, Aminoacetaldehyde dimethyl acetal  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with acryloyl chloride)  
IT 814-68-6, Acryloyl chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of; with aminoacetaldehyde di-Me acetal or  
(ethylamino)butyraldehyde di-Et acetal)  
IT 68029-07-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reduction of, to (ethylamino)butyraldehyde di-Et acetal)  
IT 65572-63-6 107979-28-2 107979-29-3 **107979-34-0** 107979-35-1  
116117-80-7 **116117-81-8**  
RL: USES (Uses)  
(self-crosslinking performance of)  
IT **107979-34-0 116117-81-8**  
RL: USES (Uses)  
(self-crosslinking performance of)  
RN 107979-34-0 HCAPLUS  
CN 2-Propenoic acid, butyl ester, polymer with N-(4,4-diethoxybutyl)-N-ethyl-  
2-propenamide (9CI) (CA INDEX NAME)

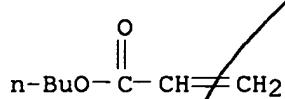
CM 1

CRN 107979-33-9  
CMF C13 H25 N O3



CM 2

CRN 141-32-2  
CMF C7 H12 O2



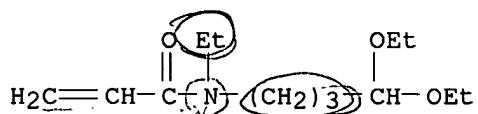
RN 116117-81-8 HCPLUS

CN 2-Propenoic acid, butyl ester, polymer with N-(4,4-diethoxybutyl)-N-ethyl-2-propenamide and 3,3,9,9-tetramethyl-2,4,8,10-tetraoxaspiro[5.5]undecane (9CI) (CA INDEX NAME)

CM 1

CRN 107979-33-9

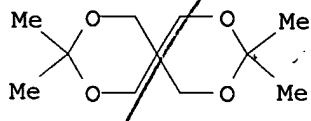
CMF C13 H25 N O3



CM 2

CRN 29280-21-5

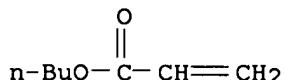
CMF C11 H20 O4



CM 3

CRN 141-32-2

CMF C7 H12 O2



L18 ANSWER 4 OF 6 HCPLUS COPYRIGHT 2005 ACS on STN

AN 1987:599535 HCPLUS

DN 107:199535

TI Polymers containing self- and diol-reactive formaldehyde-free crosslinking monomers

PA Air Products and Chemicals, Inc., USA

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	JP 62036405	A2	19870217	JP 1986-184976	19860806	
	US 4663410	A	19870505	US 1985-762978	19850806	
	CA 1339386	A1	19970826	CA 1986-615971	19860728	
	BR 8603599	A	19870310	BR 1986-3599	19860730	
	EP 218827	A2	19870422	EP 1986-110618	19860731	
	EP 218827	A3	19890118			
	R: BE, DE, FR, GB, IT, NL, SE					
	ES 2000840	A6	19880316	ES 1986-869	19860805	
	US 5463007	A	19951031	US 1993-64726	19930519	
PRAI	US 1985-762977	A	19850806			
	US 1985-762978	A	19850806			
	US 1990-471146	B1	19900126			
	US 1991-728773	B1	19910708			
AB	Polymers prepared with monomers RN <sub>1</sub> (CH <sub>2</sub> ) <sub>n</sub> C(OR <sub>2</sub> )(OR <sub>3</sub> )R <sub>4</sub> (R = C <sub>3</sub> -24 olefinically unsatd. group; R <sub>1</sub> = H or C <sub>1</sub> -4 alkyl; RR <sub>1</sub> = group completing 5-7 membered ring containing N; R <sub>2</sub> and R <sub>3</sub> = H, C <sub>1</sub> -4 alkyl; R <sub>2</sub> R <sub>3</sub> = C <sub>2</sub> -4 alkylene; R <sub>4</sub> = H, C <sub>1</sub> -4 alkyl, etc.; n = 1-10) are self-crosslinking or crosslinkable with compds. containing OH groups and are useful for preparing adhesives, binders, coating materials, etc. An emulsion of a copolymer prepared from vinyl acetate, ethylene, and H <sub>2</sub> C:CHCONH(CH <sub>2</sub> ) <sub>3</sub> CH(OEt) <sub>2</sub> [prepared from H <sub>2</sub> N(CH <sub>2</sub> ) <sub>3</sub> CH(OEt) <sub>2</sub> and H <sub>2</sub> C:CHCOCl] had solids content 44.4%, pH 4.52, and viscosity 1080 cP.					
IC	ICM C08F020-58					
	ICS C08F016-00; C08F020-60; C08F022-00; C08F026-06					
CC	37-6 (Plastics Manufacture and Processing) Section cross-reference(s): 23, 27, 35					
ST	acrylamidobutanal acetal prepn polymn; butanal acrylamido acetal prepn polymn; acetal olefin prepn polymn; aminoalkanal unsatd acetal prepn polymn; alkanal acetal olefin prepn polymn; crosslinking unsatd aminoalkanal acetal; polymn unsatd aminoalkanal acetal					
IT	Monomers					
	RL: PREP (Preparation)					
	(acetals of unsatd. aminoalkanal derivs., preparation of crosslinking)					
IT	Vinyl compounds, preparation					
	RL: PREP (Preparation)					
	(aminoalkanal acetal derivs., preparation and polymerization of crosslinking)					
IT	Polymerization					
	(of ethylenically unsatd. derivs. of aminoalkanal acetals)					
IT	Crosslinking					
	(polymers containing acetals of unsatd. aminoalkanal derivs. for)					
IT	Acetals					
	RL: USES (Uses)					
	(unsatd., containing amido and amino groups, as crosslinking monomers)					
IT	Amides, preparation					
	RL: PREP (Preparation)					
	(unsatd., preparation of, of aminoalkanal acetals, for polymerization and crosslinking)					
IT	25951-70-6					
	RL: USES (Uses)					
	(crosslinkable, for adhesives and binders)					
IT	68029-07-2P					
	RL: PREP (Preparation)					
	(preparation of)					
IT	65572-63-6P 107979-09-9P 107979-10-2P 107979-11-3P 107979-14-6P					
	107979-16-8P 107979-17-9P 107979-18-0P 107979-20-4P 107979-23-7P					

107979-27-1P 107979-28-2P 107979-29-3P 107979-30-6P 107979-32-8P  
**107979-34-0P** 107979-35-1P 107979-37-3P 107979-41-9P  
 107979-43-1P 107979-45-3P 107979-47-5P 107979-50-0P 107979-51-1P  
 107979-53-3P 107998-66-3P 109997-77-5P 109997-78-6P 109997-79-7P  
 109997-80-0P 109997-81-1P 109997-82-2P 109997-83-3P 109997-84-4P  
 109997-85-5P 110017-22-6P 110017-23-7P

RL: PREP (Preparation)  
 (preparation of crosslinkable)

IT 49707-23-5P 68029-07-2P 76619-99-3P 97387-72-9P 106412-41-3P  
 107979-15-7P 107979-19-1P 107979-21-5P 107979-33-9P 107995-78-8P

RL: PREP (Preparation)  
 (preparation of, as crosslinking monomer)

IT 25067-01-0P, Butyl acrylate-vinyl acetate copolymer 107979-54-4P  
 RL: PREP (Preparation)

(preparation of, for adhesives and binders)

IT **107979-34-0P**

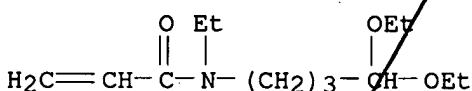
RL: PREP (Preparation)  
 (preparation of crosslinkable)

RN 107979-34-0 HCPLUS

CN 2-Propenoic acid, butyl ester, polymer with N-(4,4-diethoxybutyl)-N-ethyl-2-propenamide (9CI) (CA INDEX NAME)

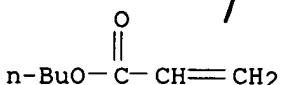
CM 1

CRN 107979-33-9  
 CMF C13 H25 N O3



CM 2

CRN 141-32-2  
 CMF C7 H12 O2



L18 ANSWER 5 OF 6 HCPLUS COPYRIGHT 2005 ACS on STN

AN 1987:177060 HCPLUS

DN 106:177060

TI Self- and diol-reactive crosslinkable monomers and polymers derived from them

PA Air Products and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

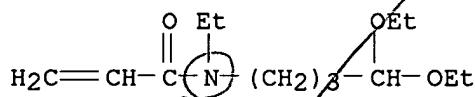
PI	JP 61227552	A2	19861009	JP 1986-64675	19860322
	JP 06029226	B4	19940420		
	CA 1283907	A1	19910507	CA 1986-504114	19860314
	EP 201693	A2	19861120	EP 1986-103715	19860319
	EP 201693	A3	19880727		
	EP 201693	B1	19911127		
	R: BE, DE, FR, GB, IT, NL, SE				
	ES 553190	A1	19871201	ES 1986-553190	19860320
	BR 8601302	A	19861202	BR 1986-1302	19860321
	US 4864055	A	19890905	US 1987-92744	19870903
	CA 1316172	A2	19930413	CA 1990-615780	19900704
PRAI	US 1985-714661	A	19850321		
	CA 1986-504114	A3	19860314		
OS	CASREACT 106:177060				
AB	RR1N(CH <sub>2</sub> ) <sub>n</sub> C(OR <sub>2</sub> )(OR <sub>3</sub> )R <sub>4</sub> , where R = C <sub>3</sub> -24 olefinic unsatd. polymerizable groups or R <sub>5</sub> CO (R <sub>5</sub> = C <sub>2</sub> -23 olefinic unsatd. polymerizable organic group); R <sub>1</sub> = H or C <sub>1</sub> -4 alkyl or R, R <sub>1</sub> , and N forming olefinic unsatd. polymerizable 5-7-membered rings, R <sub>2</sub> , R <sub>3</sub> = H, C <sub>1</sub> -4 alkyl or acyl, or both C <sub>2</sub> -4 alkylene, R <sub>4</sub> = H, C <sub>1</sub> -4 alkyl, acyl, ester, amide, or acid, n = 1-10, when n ≠ 1, R = (meth)acryloyl, R <sub>2</sub> , R <sub>3</sub> = Me, R <sub>1</sub> , R <sub>4</sub> = H are useful as the title monomers. Thus, 95 g 4-aminobutyraldehyde di-Et acetal was mixed with 955 mL CH <sub>2</sub> C <sub>12</sub> containing 160 mL 14 N aqueous NaOH cooled at 15°, mixed with 98.3 g acryloyl chloride at <30°, and stirred for an addnl. hour to prepare 87% acrylamidobutyraldehyde di-Et acetal (I), which was polymerized with ethylene and vinyl acetate to give a polymer containing 6% I.				
IC	ICM C07C091-04				
	ICS C07C093-04; C07C097-02; C07C103-18				
ICA	C08F018-22; C08F020-36; C08F020-58; C08F026-02				
CC	35-4 (Chemistry of Synthetic High Polymers)				
	Section cross-reference(s): 23, 40, 43				
ST	acrylamidobutyraldehyde diethyl acetal prepn polymn; acryloyl chloride aminobutylaldehyde acetal reaction; ethylene acrylamidobutyraldehyde diethyl acetal polymer; vinyl acrylamidobutyraldehyde diethyl acetal polymer				
IT	Paper				
	(coatings on, unsatd. acetal polymers as)				
IT	Textiles				
	(nowoven, binders for, unsatd. acetal polymers as)				
IT	Polymerization				
	(of unsatd. acetals)				
IT	Binding materials				
	(unsatd. acetal copolymers, for nowoven textiles)				
IT	Coating materials				
	(unsatd. acetal polymers, on paper)				
IT	Crosslinking agents				
	(unsatd. acetals, for vinyl polymers)				
IT	Acetals				
	RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)				
	(unsatd., manufacture and polymerization of)				
IT	14618-78-1				
	RL: RCT (Reactant); RACT (Reactant or reagent)				
	(hydrogenation of)				
IT	1468-47-9P				
	RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)				

(manufacture and hydrogenation of)  
IT 107979-21-5P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(manufacture and isomerization of)  
IT 97387-72-9P 107979-15-7P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(manufacture and polymerization of)  
IT 19060-15-2P 21938-23-8P 107995-78-8P  
RL: PREP (Preparation)  
(manufacture and reaction with acryloyl chloride)  
IT 68029-07-2P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(manufacture and reduction of)  
IT 107979-18-0P 107979-20-4P 107979-39-5P 107979-41-9P 107979-43-1P,  
N-Allyl-N'-(diethoxyethyl)urea-vinyl acetate copolymer 107979-45-3P,  
N-(Diethoxybutyl)-O-vinyl carbamate-vinyl acetate copolymer 107979-47-5P  
107979-49-7P 107998-66-3P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, for coatings for paper)  
IT 23101-93-1P 23105-58-0P, N-Acetyl-2-pyrrolidine 49707-23-5P,  
Acrylamidoacetaldehyde dimethyl acetal 63050-21-5P, N-Acetyl-2-methoxypyrrolidine 65572-63-6P, Butyl acrylate-butyoxymethylacrylamide copolymer 69001-11-2P, N-Acetyl-2-ethoxypyrrolidine 76619-99-3P  
86968-39-0P 106412-41-3P 107979-09-9P 107979-10-2P 107979-11-3P  
107979-12-4P 107979-13-5P 107979-14-6P 107979-16-8P 107979-17-9P  
107979-18-0P 107979-19-1P 107979-20-4P 107979-22-6P,  
O-Allyl-N-(4,4-diethoxybutyl)carbamate-ethyl-vinyl acetate copolymer 107979-23-7P 107979-24-8P, O-Allyl-N-(4,4-diethoxybutyl)carbamate-butyl acrylate-vinyl acetate copolymer 107979-25-9P 107979-26-0P,  
N-Acryloyl-2-hydroxypyrrolidine-butyl acrylate-vinyl acetate copolymer 107979-27-1P, Butoxymethyl acrylamide-butyl acrylate-vinyl acetate copolymer 107979-28-2P 107979-29-3P 107979-30-6P 107979-31-7P  
107979-32-8P 107979-33-9P **107979-34-0P** 107979-35-1P  
107979-37-3P 107979-40-8P 107979-42-0P, N-Allyl-N'-(diethoxyethyl)urea 107979-44-2P 107979-46-4P 107979-48-6P, N-Vinylsulfonyl-2-ethoxypyrrolidine 107979-50-0P 107979-51-1P 107979-52-2P  
107979-53-3P 107979-54-4P, Butyl acrylate-N-methylacrylamide-vinyl acetate copolymer 107995-79-9P 107995-80-2P 107995-81-3P  
107995-82-4P 107995-83-5P 107995-84-6P 107995-86-8P 107995-87-9P  
107995-88-0P 107995-89-1P  
RL: PREP (Preparation)  
(preparation of)  
IT 625-69-4, 2,4-Pentandiol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with acetamidobutyraldehyde di-Et acetal)  
IT 6346-09-4 22483-09-6, Aminoacetaldehyde dimethyl acetal  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with acryloyl chloride)  
IT 4170-30-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with allyl urea)  
IT 108-31-6, reactions 1476-23-9, Allyl isocyanate 30674-80-7,  
Isocyanatoethyl methacrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aminoacetaldehyde di-Et acetal)

IT 75-36-5 102-92-1, Cinnamoyl chloride 814-68-6, Acryloyl chloride  
1622-32-8, 2-Chloroethanesulfonyl chloride 2937-50-0, Allyl  
chloroformate 5130-24-5, Vinyl chloroformate 10487-71-5, Crotonoyl  
chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aminobutyraldehyde di-Et acetal)  
IT 107-11-9, Allylamine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aminobutyraldehyde di-Et acetal in cyanuric  
chloride)  
IT 557-11-9, Allyl urea  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with crotonaldehyde)  
IT 64-17-5, Ethanol, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with cyanobutyraldehyde)  
IT 3350-74-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with ethanol)  
IT 645-36-3, Aminoacetaldehyde diethyl acetal  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with maleic anhydride)  
IT 107979-34-0P  
RL: PREP (Preparation)  
(preparation of)  
RN 107979-34-0 HCAPLUS  
CN 2-Propenoic acid, butyl ester, polymer with N-(4,4-diethoxybutyl)-N-ethyl-  
2-propenamide (9CI) (CA INDEX NAME)

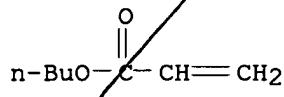
CM 1

CRN 107979-33-9  
CMF C13 H25 N O3



CM 2

CRN 141-32-2  
CMF C7 H12 O2



L18 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2005 ACS on STN  
AN 1980:24355 HCAPLUS

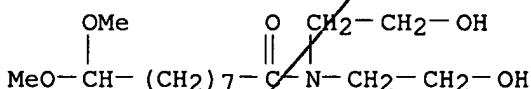
DN 92:24355

TI New solventless polymeric protective coatings from fatty acid derivatives  
AU Thomas, Freddie L.; Gast, Lyle E.

CS Agric. Res., Northern Reg. Cent., Peoria, IL, 61604, USA  
SO Journal of Coatings Technology (1979), 51(657), 51-9  
CODEN: JCTEDL; ISSN: 0361-8773  
DT Journal  
LA English  
AB Hydroxyethyl-substituted amides of Me azelaldehydate di-Me acetal (I), Me azelaldehydate di-Me acetal enol ether (II), and Me 9(10)-methoxymethylene stearate (III) are mixed with appropriate catalysts and applied to metal panels which are baked to provide coatings having Sward hardness 8-83, alkali resistance 1-120 h, and impact resistance <10 in.-lb to >160 in.-lb. Impact and hardness depended on the catalyst used. The curing mechanism is a transacetalization involving the primary OH group of the amide. Films obtained from blends of the amides and com. aminoplasts and alkanolamine copolymers with I, II, and III also exhibited good hardness and chemical resistance.  
CC 42-10 (Coatings, Inks, and Related Products)  
ST fatty acid deriv polymer coating; azelaldehydate deriv polymer coating; stearate deriv polymer coating; octadecanoic acid deriv polymer coating; solventless coating fatty acid deriv  
IT Coating materials  
(fatty acid derivative polymers, solventless)  
IT 1599-48-0D, polymers with linseed oil fatty acid diethanolamide  
1931-63-1D, polymers with linseed oil fatty acid diethanolamide  
14653-98-6D, polymers with linseed oil fatty acid diethanolamide  
72260-69-6 72260-70-9 72260-71-0 72260-72-1 72260-73-2  
72260-74-3 72260-75-4 72260-76-5 72260-77-6 72260-78-7  
72260-79-8 72260-81-2 72260-82-3 72260-84-5  
72260-85-6 72260-86-7 72260-87-8 72265-79-3 72265-81-7  
72265-83-9 72265-85-1 72300-80-2 72300-81-3 72300-94-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, solventless, properties of)  
IT 1599-48-0P 14653-98-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction of, with alkanolamines)  
IT 1931-63-1P 64284-11-3P 64284-12-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
IT 72260-81-2 72260-82-3 72260-86-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(coatings, solventless, properties of)  
RN 72260-81-2 HCAPLUS  
CN Nonanamide, N,N-bis(2-hydroxyethyl)-9,9-dimethoxy-, polymer with formaldehyde and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

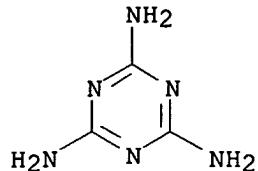
CM 1

CRN 72260-80-1  
CMF C15 H31 N O5



CM 2

CRN 108-78-1  
CMF C3 H6 N6



CM 3

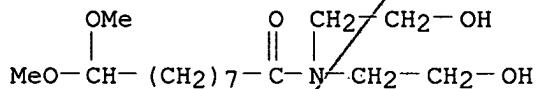
CRN 50-00-0  
CMF C H2 O

H<sub>2</sub>C=O

RN 72260-82-3 HCPLUS  
CN Nonanamide, N,N-bis(2-hydroxyethyl)-9,9-dimethoxy-, polymer with formaldehyde and urea (9CI) (CA INDEX NAME)

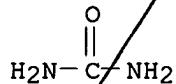
CM 1

CRN 72260-80-1  
CMF C15 H31 N O5



CM 2

CRN 57-13-6  
CMF C H4 N2 O



CM 3

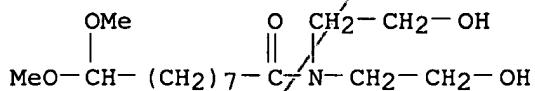
CRN 50-00-0  
CMF C H2 O

H<sub>2</sub>C=O

RN 72260-86-7 HCPLUS  
CN Nonanamide, N,N-bis(2-hydroxyethyl)-9,9-dimethoxy-, homopolymer (9CI) (CA  
INDEX NAME)

CM 1

CRN 72260-80-1  
CMF C<sub>15</sub> H<sub>31</sub> N O<sub>5</sub>



=>

Priority #1

Access DB# 142361

## SEARCH REQUEST FORM

## Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 1-11-05  
Art Unit: 1752 Phone Number 302-1333 Serial Number: 10/719,355  
Mail Box and Bldg/Room Location: 9D66 Results Format Preferred (circle):  PAPER  DISK  E-MAIL  
(Rem)

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

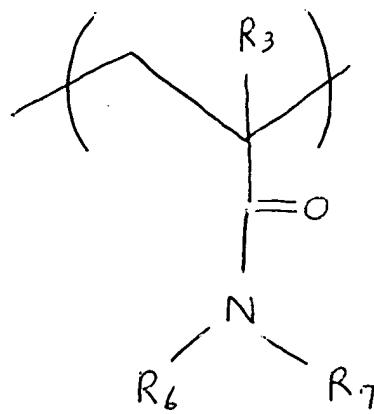
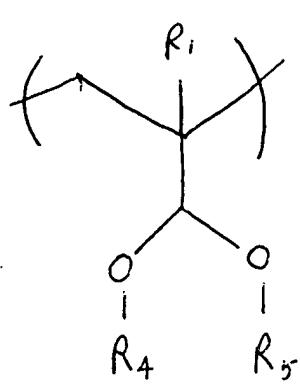
Title of Invention: P12. See B:6

Inventors (please provide full names):

Earliest Priority Filing Date:

**\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

— Please Search for the polymer having following repeating units



$R_1, R_3 = H$  or  $-CH_3$

$R_4-R_7$  = linear or branched C<sub>1</sub>–C<sub>10</sub> alkyl